### (19) World Intellectual Property Organization International Bureau





#### (43) International Publication Date 6 November 2003 (06.11.2003)

## **PCT**

# (10) International Publication Number WO 03/091753 A1

(51) International Patent Classification7:

\_

G01V 3/10

- (21) International Application Number: PCT/CA03/00564
- (22) International Filing Date: 15 April 2003 (15.04.2003)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/375,055

25 April 2002 (25.04.2002) US

- (71) Applicant (for all designated States except US): NA-TIONAL RESEARCH COUNCIL OF CANADA [CA/CA]; Intellectual Property Services, Building M 58, 1200 Montreal Road, Ottawa, Ontario K1A 0R6 (CA).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): HOULT, David, I. [GB/CA]; National Research Council of Canada, 435 Ellice Avenue, Winnipeg, Manitoba R3B 1Y6 (CA).
- (74) Agent: ADE & COMPANY; 1700-360 Main Street, Winnipeg, Manitoba R3C 3Z3 (CA).

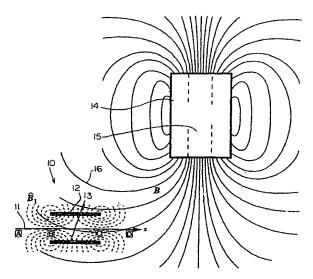
- (81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

#### Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DETECTION OF FERROMAGNETIC OBJECTS APPROACHING A MAGNET



(57) Abstract: An apparatus for detecting a potentially dangerous ferromagnetic object carried inadvertently by a person approaching the magnet of a magnetic resonance imaging system (14) uses the fringe field (16) of the magnet and provides guide members (11) defining a path along which the person is prescribed to pass. The path (11) is generally or approximately parallel to the field at the path. At least one sense coil and generally two sets of sense coils (12, 13) are located on respective sides of the path (11) so that the movement of the ferromagnetic object in the field of the magnet causes a voltage to be generated in the sense coil.



)3/091753 A1